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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/548,086	05/04/2007	Eamonn Maher	000487.00041	7642
22907 7590 01/26/2010 BANNER & WITCOFF, LTD. 1100 13th STREET, N.W. SUITE 1200 WASHINGTON, DC 20005-4051				
EXAMINER				
HE, AMY				
ART UNIT		PAPER NUMBER		
2831				
MAIL DATE		DELIVERY MODE		
01/26/2010		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/548,086

Applicant(s)

MAHER, EAMONN

Examiner

AMY HE

Art Unit

2831

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 44-88 and 90-94 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 44-73 and 75-88 and 90-94 is/are allowed.
- 6) ☒ Claim(s) 74 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 September 2005 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB-083)
Paper No(s)/Mail Date 7/6/2005 & 5/4/2007
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date: ____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____

DETAILED ACTION

Drawings

1. Figures 1 and 5 are objected to because text labels are required for the reference numerals 12, 14, 16, 18 and 20 in Fig. 1, and reference numbers 90, 92, 98, 100, 102, 104, 106, 108, 110, 112, 114, 116 and 118 in Fig. 5. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Objections

2. Claims 44, 49, 59, 84, 85, 90-94 are objected to because of the following informalities:

- 1) Claim 44, line 5, "the coil path" lacks antecedent basis. Replace "the coil path" with --a coil path--.
- 2) Claim 49, line 1, replace "548" with --48--.
- 3) Claim 59, line 1, delete "the or "before "each defective area" (on line 2).
- 4) Claim 84, line 5, "the coil path" lacks antecedent basis. Replace "the coil path" with --a coil path--.
- 5) Claim 85, line 5, "the coil path" lacks antecedent basis. Replace "the coil path" with --a coil path--.
- 6) Claims 90-94 should be renumbered as claims 89-93.
- 7) Claim 91, line 18, "the map" lacks antecedent basis. Delete "and the map" after "the data set" (on line 18).

Appropriate corrections are required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claim 74 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As for claim 74, the claim recites "a device fabricated as a result of performing the method of claim 44". However, it is unclear what device is actually being claimed, since no specific structure or components of the device are claimed. As a result of performing the method of claim 44, an optimal path and/or a coil track is defined, but it is still unclear what device is being claimed as a result of defining the optimal path and/or coil track.

Allowable Subject Matter

4. The following is a statement of reasons for the indication of allowable subject matter:

Claims 44-73 and 75 are allowable because none of the prior art discloses a method of fabricating a track in a layer of thin film material for use in a superconducting coil, the method comprising the steps of: processing the data set to form a map having features indicating variations in the physical property over the layer; for each of the defects, identifying whether the defect is irreparable; calculating an optimal path, wherein the path avoids any irreparable defects; and defining the optimal path in the layer to define the coil track, and in the combination as claimed.

Claims 76-83 are allowable because none of the prior art discloses an apparatus for fabricating a track, the track being formed in a layer of thin film material for use in a superconducting coil, the apparatus comprising: a processor being configured to process the data set to form a map having features indicating variations in the physical property over the layer; analyze the map to identify and locate each defect and identify each defect that is irreparable; calculating an optimal coil path, wherein the path avoids

any irreparable defects; and control a coil writer to define the optimal coil path into or onto the layer, thereby defining the coil track, and in the combination as claimed.

Claim 84 is allowable because none of the prior art discloses a method of fabricating a track in a layer of thin film material for use in a superconducting coil, the method comprising the steps of: processing the data set to form a map having features indicating variations in the physical property over the layer; for each of the defects, identifying whether the defect is irreparable; calculating a number of coil paths so as to avoid the irreparable defects; choosing one of the coil paths as an optimal path; and forming the optimal path in the layer to define the coil track, and in the combination as claimed.

Claims 85-88 and 90 are allowable because none of the prior art discloses a method of fabricating a track in a layer of thin film material for use in a superconducting coil, the method comprising the steps of: processing the data set to identify and locate variations of the physical property in the layer; choosing an optimal path based on variations in the physical property; and defining the optimal path in the layer to define the coil track, and in the combination as claimed.

Claims 91-94 are allowable because none of the prior art discloses an apparatus for fabricating a track, the track being formed in a layer of thin film material for use in a superconducting coil, the apparatus comprising: a processor being configured to process the data set to identify and locate the variations of the physical property in the layer, choose an optimal coil path based on the detected variations in the physical

property, and control a coil writer to define the optimal coil path into or onto the layer, thereby defining the coil track, and in the combination as claimed.

Conclusion

5. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Shinde et al. (U. S. Patent 5, 218,296) discloses an apparatus and method for measuring a characteristic of a film comprised of superconducting material. The apparatus comprises a measurement circuit and a processor.

Chinone et al. (U. S. Patent 5, 854,492) discloses a nondestructive inspection apparatus for measuring the position and size of defect on a superconductive sample.

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMY HE whose telephone number is (571)272-2230. The examiner can normally be reached on 9:30am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Diego Gutierrez can be reached on 571-272-2245. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Amy He/
Primary Examiner, Art Unit 2831